



# ***Marine Corps Reservists Needs Assessment 2011***

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## **Marine Corps Reservists Needs Assessment 2011**

### ***Executive Summary***

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## **Introduction**

In light of historically unprecedented operational demands, U.S. military Reservists are key participants in the Global War on Terror. In recent years, Reservists have comprised between 20% and 40% of all deployed forces in Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF; Chu, 2006). These individuals are unique because they serve both at home and abroad while retaining commitments to their civilian occupations. It is plausible, then, that involvement in deployments, particularly with combat exposure, has different ramifications for Reservists than for active-duty members. In 2006, the Department of Defense (DoD) sponsored a survey of the experiences, needs, health status, and behaviors of National Guard and Reserve personnel across all military services (Hourani et al., 2007). In that effort, the authors found that Marine Corps Reservists engaged in heavy alcohol use and binge drinking more frequently than their Reserve counterparts in the other services. It was also shown that nearly 1 in 5 Marine Corps Reservists demonstrated a need for further depression evaluation, and 1 in 10 met screening criteria for Generalized Anxiety Disorder. Since this report, there has been no large-scale, systematic evaluation of this population in over 5 years.

In the interim, however, a small number of research studies continue to demonstrate that the challenges of Reservist life confer additional risk for mental health problems (Milliken, Auchterlonie, & Hoge, 2007), substance abuse/dependence (Jacobsen et al., 2008), and family/relationship problems (Vogt et al., 2008). Studies on Reserve component military members have primarily focused on National Guard and/or Reserve members sampled across services. Each service, however, embodies a culture of its own, with norms, standards, procedures and practices that are distinct from other services. Since its inception in 1775, The Marine Corps has undoubtedly evolved its own cultural identity, of which it takes great pride. Beyond the need to characterize the broader Reserve population, then, there is also a demand for detailed assessments of each service. Thus, a need exists to evaluate the status of this population; characterize trends across the past 5 years; and identify areas for potential interventions via Marine Corps policy, clinical/operational programs, or research.

With this in mind, the purpose of this report is to provide a focused account of the experiences, needs, health status, and behaviors of Marine Corps Reservists. Specifically, key findings of the 2011 Marine Corps Reservists Needs Assessment Survey are summarized. We first outline the central findings across broad categories, such as mental health status and service utilization; alcohol, tobacco, and other drug use; sources of social support; combat deployment and combat exposure; and health care coverage. Next, we characterize key trends in this population across the past 5 years and compare key subgroups. Finally, we identify implications for Marine Corps policy, as well as opportunities for clinical and operational intervention to improve health and readiness.

## **Approach and Participant Characteristics**

A cross-sectional, population-based representative sample of 1,331 Marine Corps Reservists was surveyed. The majority of surveys were completed in person at the drilling site, and a small supplemental number of surveys were completed via the Internet. The response rate to the on-site survey was 98.5%. The typical Marine Corps Reservist in this study was 27 years old and joined

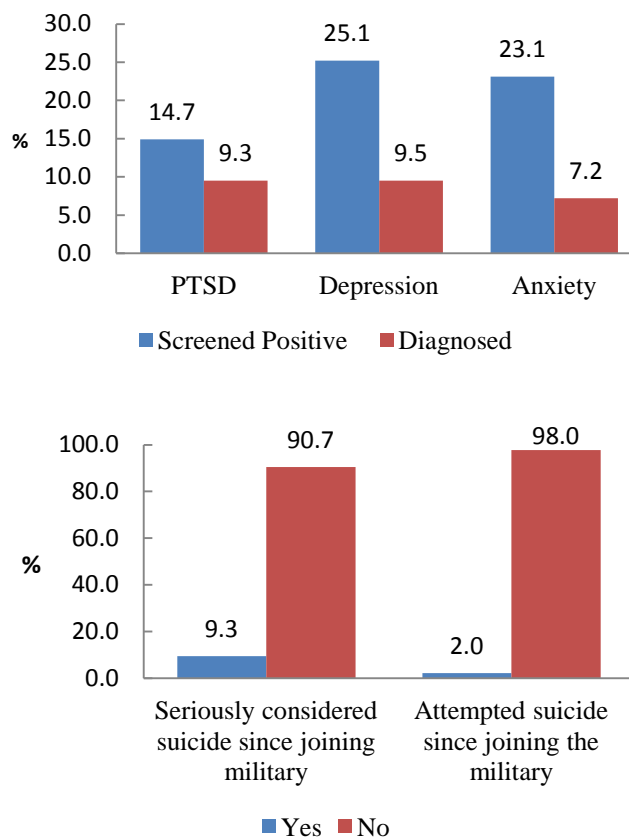
the Reserves at age 21. Most were male, single, Caucasian, and enlisted. One in five had received a 4-year college degree. About half of the Reservists reported some college but no 4-year degree, while one quarter endorsed a high school diploma or less.

## Results

### Mental and Behavioral Health

#### Mental Health Status

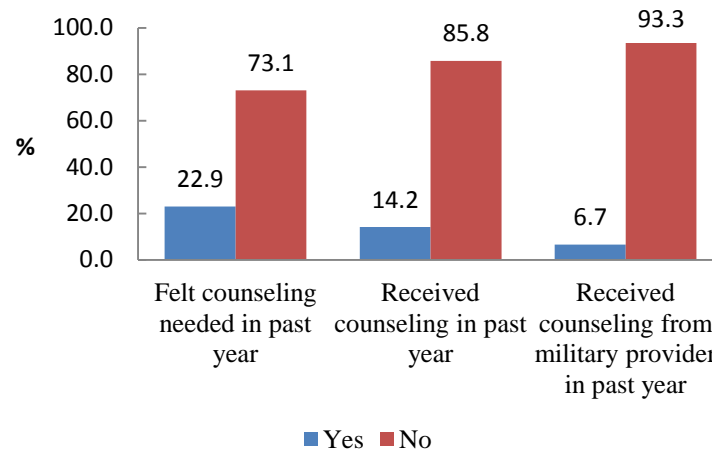
Mental health issues are a source of much ongoing concern and debate within the U.S. military. In the current study, 1 in 7 respondents (14%) screened positive for posttraumatic stress disorder (PTSD) based on their responses to PTSD symptom items in the survey. Presence of anxiety and depression were each detected in one quarter of participants. Nearly 1 in 10 reported having received a *diagnosis* of depression from a health care provider during his or her military service; similar numbers cited ever receiving a diagnosis of PTSD. Moreover, almost 1 in 10 reported serious suicidal thoughts since joining the military; a very small fraction of the Marines endorsed having attempted suicide in this time frame.



#### Mental Health Service Utilization

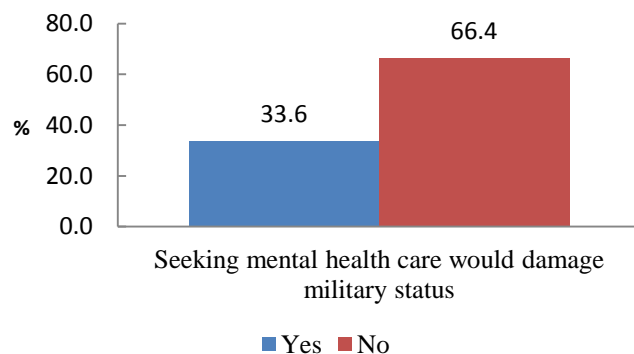
Participants were asked if at any time in the past 12 months they felt that they needed counseling or therapy from a mental health professional. Nearly 1 in 4 felt that they needed such treatment. However, only 1 in 7 endorsed receiving treatment (from any source) during this time frame.

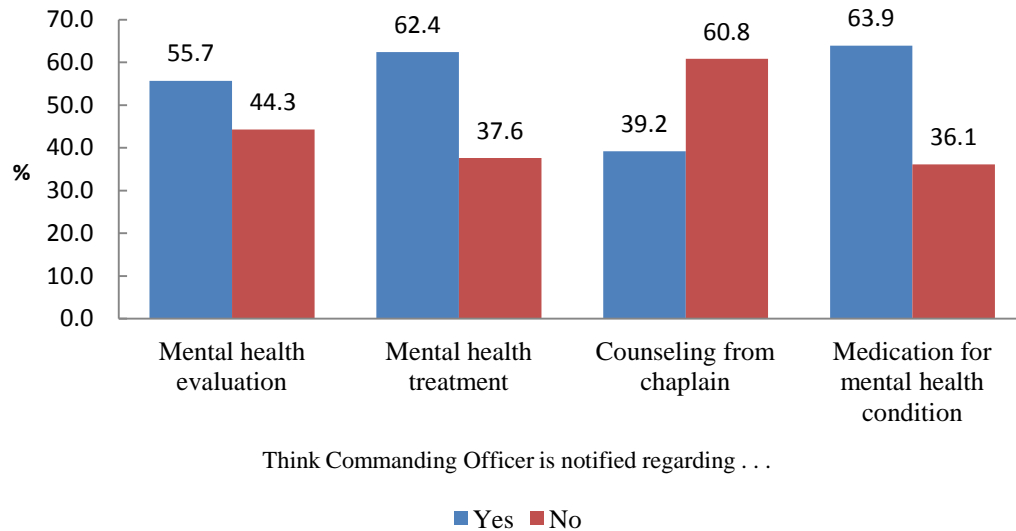
Only a fraction reported seeing a mental health professional at a military facility, suggesting that for many of these individuals the counseling was received by other sources (e.g., military chaplain, civilian mental health professional, or self-help group).



### Barriers to Mental Health Care

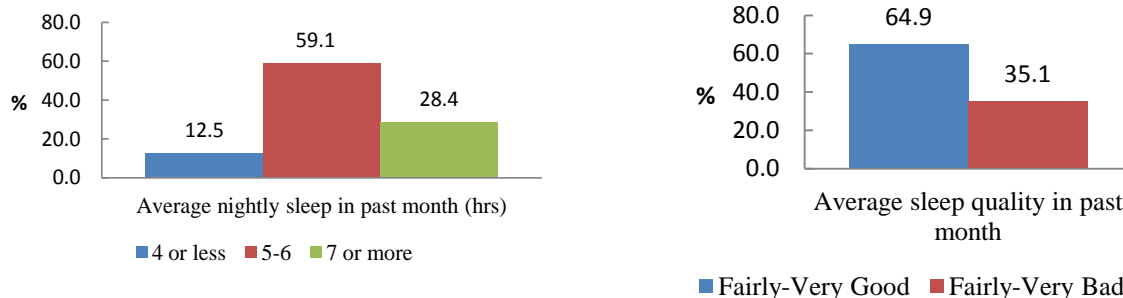
Participants were asked if they believed that seeking mental health care would damage their status in the military. One third felt that seeking treatment would be damaging to their career. Also, they were asked if they thought that their Commanding Officer would be notified if they sought mental health care. More than half felt that their Commanding Officer would be notified if they underwent a mental health evaluation or received mental health treatment, respectively. Of note, nearly 40% felt that that their Commanding Officer would be notified if they received counseling from a chaplain.





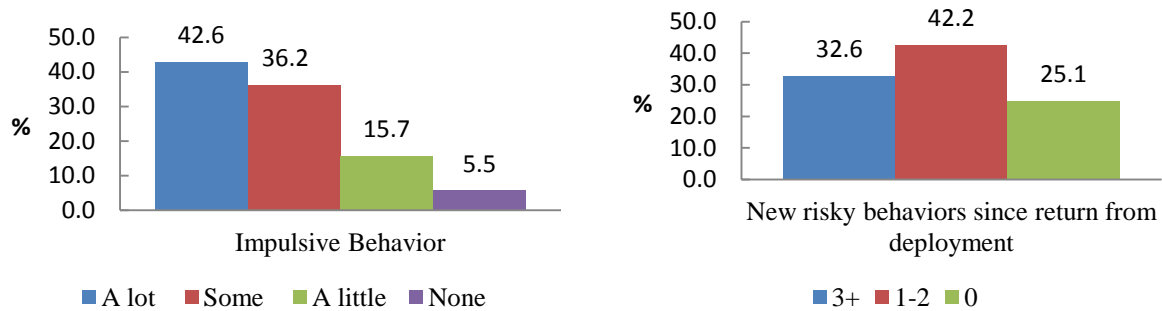
### Sleep Quantity and Quality

Just over one quarter of the Reservists reported getting 7 or more hours of sleep each night during the past 12 months. More than half indicated that they averaged 5–6 hours per night, while one tenth averaged 4 or fewer hours. Participants were also asked to describe the *quality* of their sleep during the past 30 days. Approximately two thirds of the Marines reported fairly good or very good sleep quality, while one third endorsed fairly bad or very bad sleep quality.



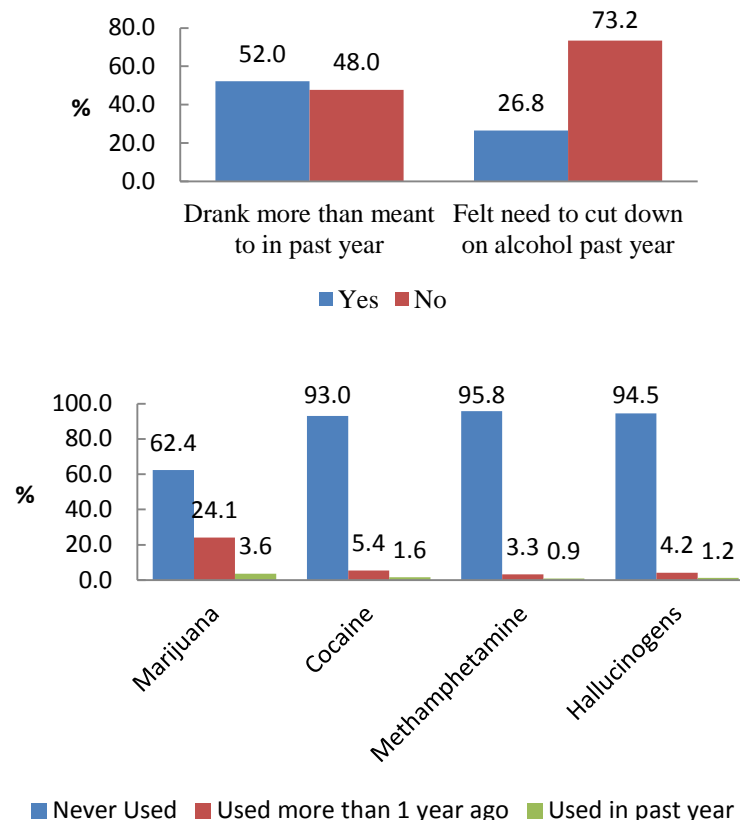
### Risk-Taking Behaviors

A substantial portion of Marine Corps Reservists in this sample endorsed “a lot” of impulsive risk-taking behavior, while similar numbers reported “some” impulsive behavior. Of particular concern, three fourths of these Marines reported engaging in at least one *new* risky behavior since returning from his or her most recent combat deployment; nearly one third endorsed at least three new risky behaviors, such as engaging in new hobbies that one’s family finds dangerous or taking alcohol to inappropriate places.



### Alcohol, Tobacco, and Other Drug Use

Nearly one third of the Marine Reservists in this sample reported having smoked cigarettes within the past month. Over half of the Marines endorsed ever drinking alcohol more than he or she meant to during the past year, and one quarter reported feeling that he or she needed to cut down on drinking within the past year. Nearly one third cited having driven a car in the past year after drinking too much. Very few respondents (3.6%) had used marijuana within the past year. A clear minority of Marines endorsed ever using cocaine products, methamphetamine, or hallucinogens.

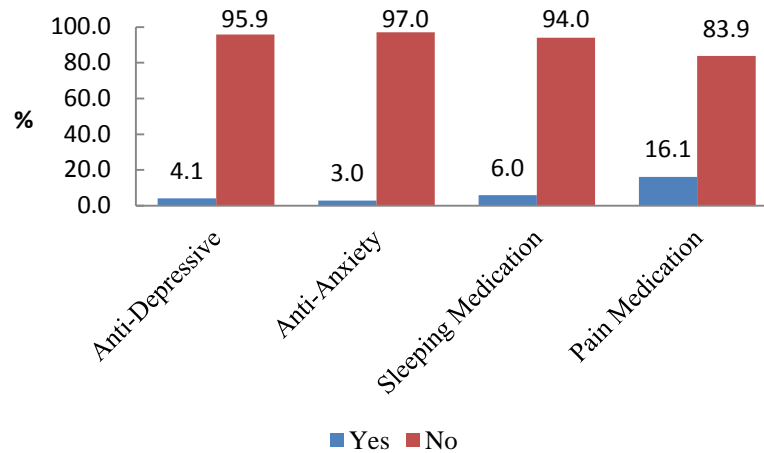


### Prescription Medication Use

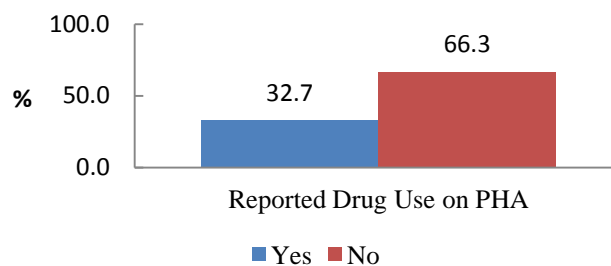
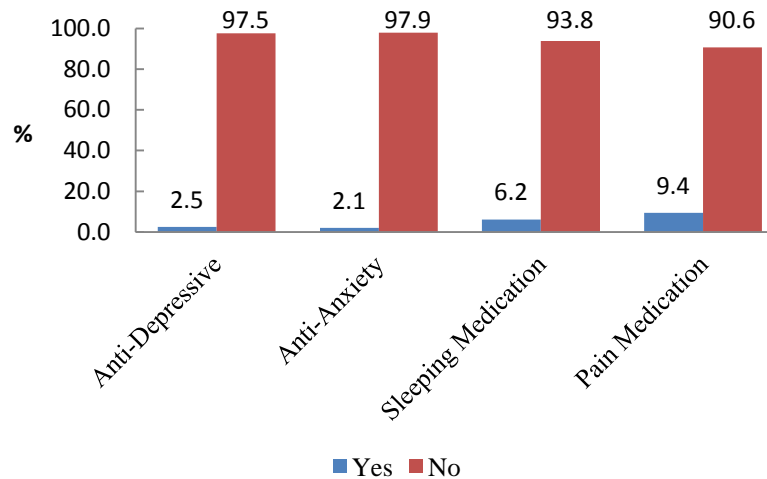
Reservists in this study were asked about their use of prescription medications. Less than 10% endorsed receiving a prescription for depression, anxiety, or sleep, respectively. However, 1 in 6

reported receiving a prescription for pain. Participants were also asked if they used antidepressive, anti-anxiety, sleep, or pain medication *without* a prescription. Nearly one in ten endorsed using pain medication without a prescription. Finally, of those who endorsed taking medications without a prescription, two thirds said that they did not report it on their Periodic Health Assessment (PHA).

#### Prescribed medication use



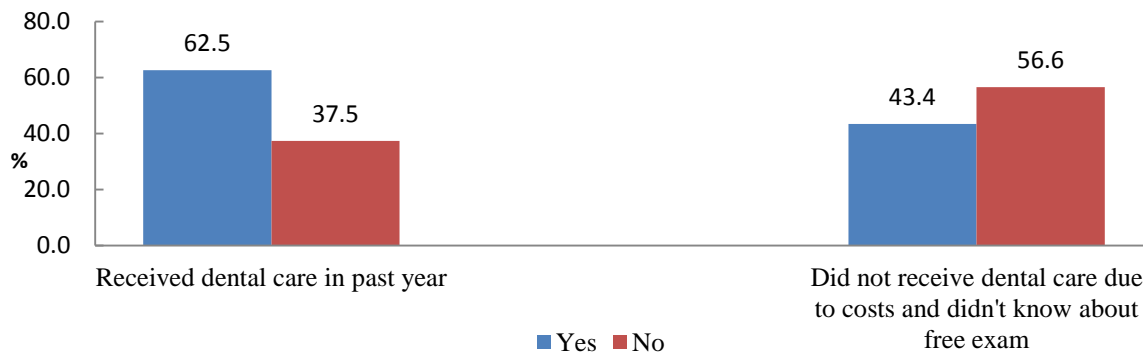
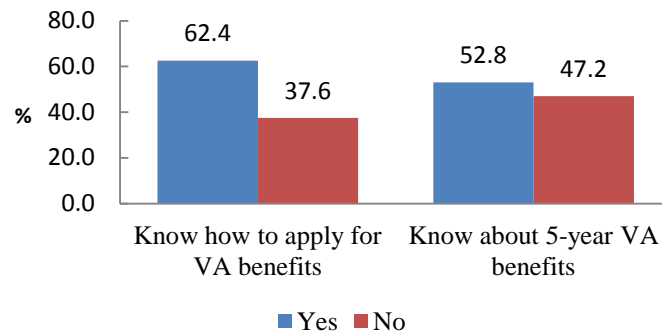
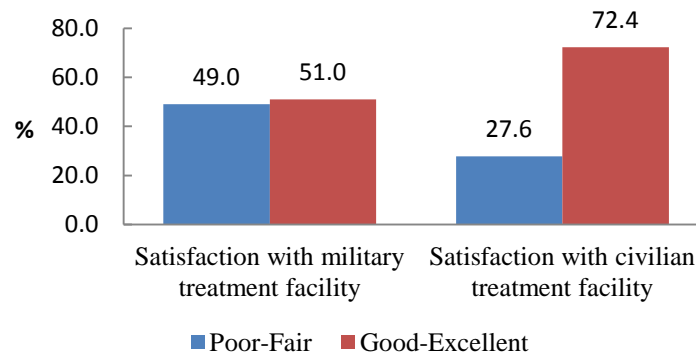
#### Use of medication without prescription





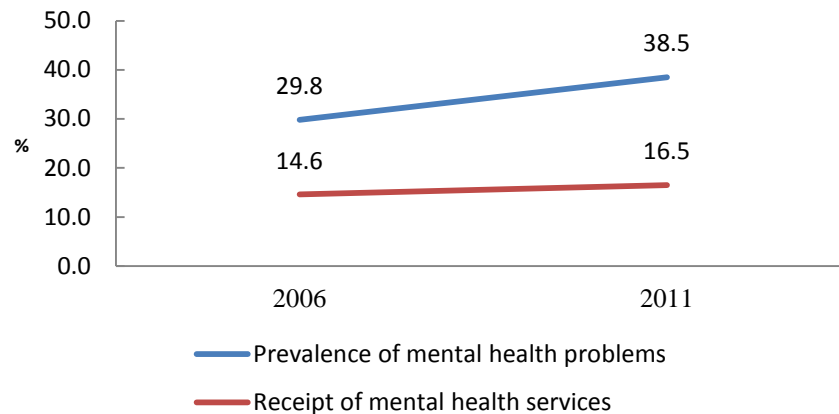
### Health Care and Health Care Coverage

Participants were asked to rate their experiences in receiving care in a military treatment facility or operational setting. Approximately half felt that the overall care was good or excellent. By contrast, when asked to rate the care received in a *civilian* facility, a decisive majority of the Marines reported good or excellent care. Nearly half had applied for Department of Veterans Affairs (VA) benefits within the past year. Fewer than 1 in 10 endorsed ever being denied VA benefits. Importantly, over one third of the Reservists reported not knowing how to apply for VA benefits, and nearly half did not know that if they serve in OEF/OIF then they are eligible for VA benefits for up to 5 years. Nearly 40% of respondents had not received any dental treatment within the last year, most of whom attributed this to an inability to afford dental care and not being aware that one could receive a free exam and class 3 treatment.



### Key Mental Health Trends 2006–2011

Comparing the current findings with the 2006 DoD report on Reservists (Hourani et al., 2007), Marine Corps Reservists in the 2011 sample are twice as likely to endorse clinically significant PTSD symptoms, 1.3 times more likely to meet screening criteria for depression, twice as likely to meet screening criteria for anxiety, and 1.3 times more likely to endorse perceived stress than their counterparts in the 2006 sample. The 2011 respondents are 1.5 times more likely to endorse “any mental health problem.” However, no substantive differences emerged with respect to mental health service utilization.



Respondents to the recent survey did not differ from the 2006 sample with respect to drug use or serious alcohol-related consequences such as driving while intoxicated, trouble on the job (civilian or military) due to alcohol use, or trouble with the police due to alcohol use.

### Comparing Combat Deployers and Non-Combat Deployers

Marines in this sample who had deployed to a combat zone did not differ from those who had not in their likelihood of receiving a diagnosis of depression during their military career. However, greater percentages of those who had combat deployed endorsed receiving diagnoses of anxiety (11% vs. 4%) and PTSD (13% vs. 3%), respectively. Similarly, combat deployers endorsed more PTSD symptoms over the past 30 days than their counterparts who had not combat deployed. Finally, a greater proportion of combat deployers had received mental health counseling within the past year (23% vs. 14%).

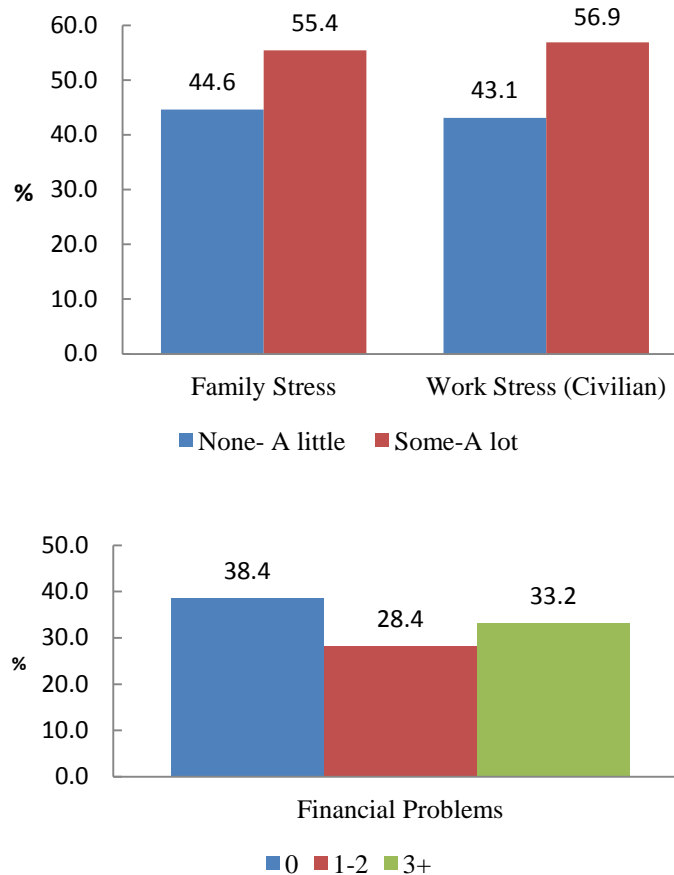
### Comparing U.S. Marine Corps Reserve and Active-Duty Personnel

A comparison of the current Marine Corps Reserve sample with a 2008 active-duty Marine Corps sample (Bray et al., 2009) suggests several similarities in mental health status between these groups. For example, percentages of individuals screening for further evaluation for depression and PTSD appear similar. However, the percentage of individuals screening for further evaluation for anxiety appears slightly higher in the Reservists. It is important to note that these are informal comparisons across separate databases in which mental health variables may not have been measured identically.

## Stress and Coping

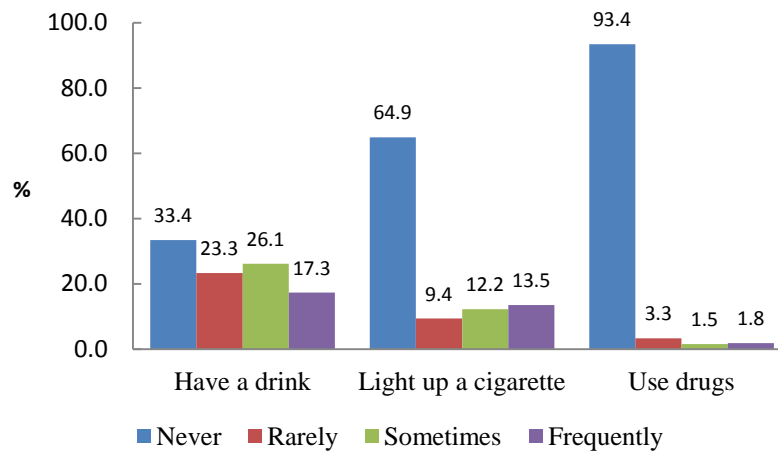
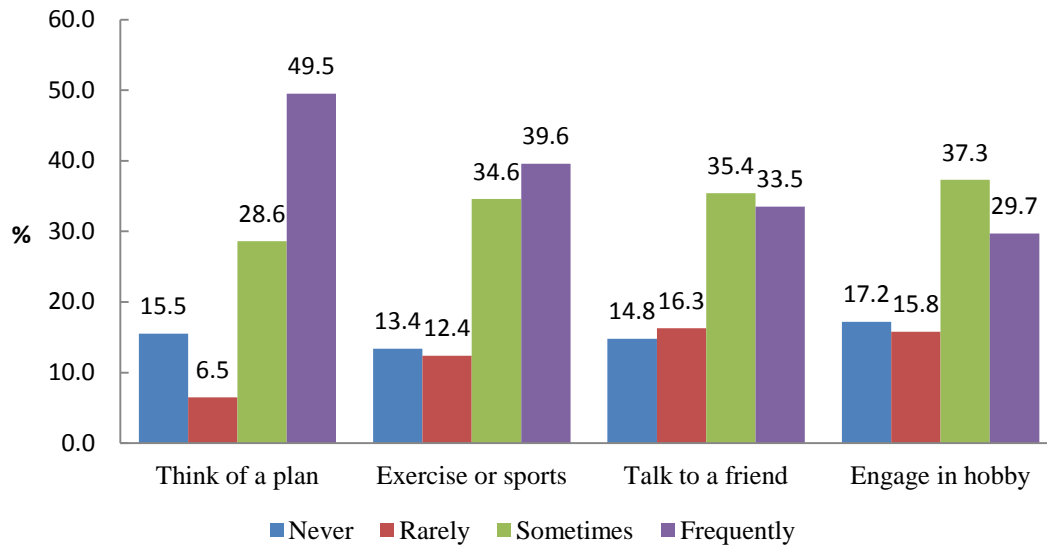
### Stress Levels

More than half of respondents endorsed some or a lot of stress in family life and at their civilian work, respectively. Regarding financial stress, one third of the Reservists acknowledged at least three financial problems within the past 12 months.



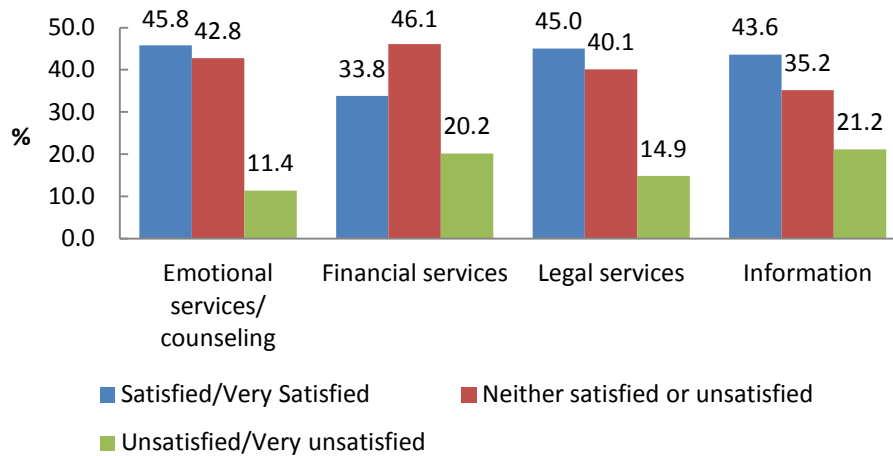
### Coping Behaviors

Participants were asked how often they engage in different coping activities (e.g., talking to a friend, praying, smoking/drinking, eating) when they feel pressured, stress, depressed, or anxious. The most frequently cited activity was “thinking of a plan to solve the problem”; the second was exercising or playing sports. Nearly one third endorsed talking to a friend frequently; similar numbers reported frequently engaging in a hobby. On the whole, these Marines reported engaging in active, constructive coping behaviors more frequently than potentially harmful behaviors such as smoking or drinking.



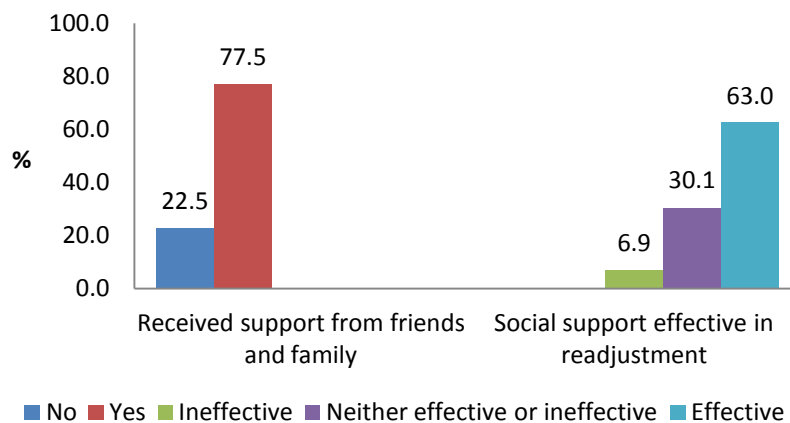
### Satisfaction with Military Support Services

Marines in this study were asked to rate their level of satisfaction with the Reserve support they received across several broad domains of health care, emotional/counseling, financial, legal, and information support. In sum, there was no particular source of Reserve support that was rated as satisfactory by a majority. However, regarding emotional/counseling support available through one's Reserve office, nearly half were satisfied or very satisfied with the support they received. Similar numbers were satisfied or very satisfied with legal and information support.



### Sources of Social Support

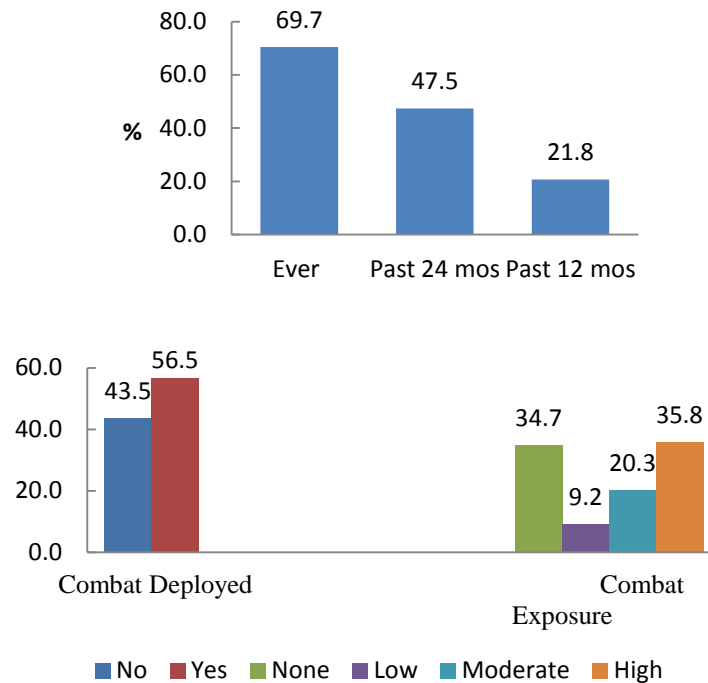
A majority of respondents who had deployed noted that they had received the social support that they needed from friends and family upon return from their most recent deployment. Similarly, most of those who had deployed felt that the social support they received from family and friends was effective or very effective in helping them readjust to civilian life.



### Military Experiences

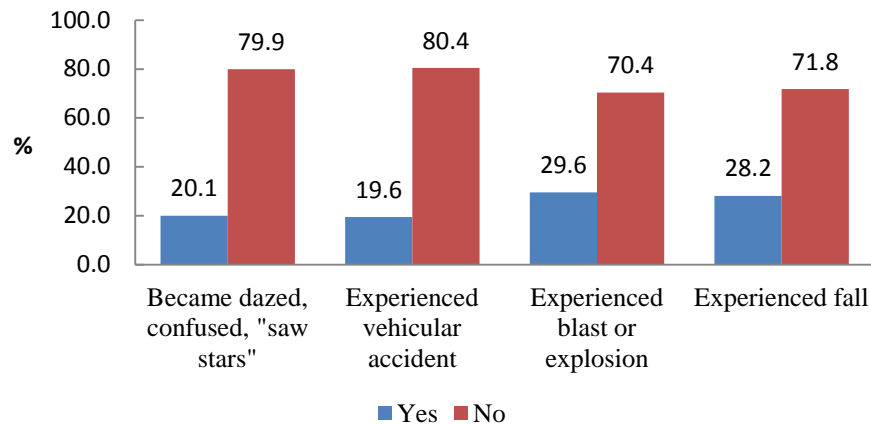
#### Combat Deployment and Combat Exposure

Most Marine Reservists reported having been deployed at least once. Nearly half had deployed within the past 24 months and one fifth had deployed within the past 12 months. More than half endorsed having ever been combat deployed. Of those who had deployed, over one third cited high combat exposure.



### Traumatic Brain Injury and Other Combat Injuries

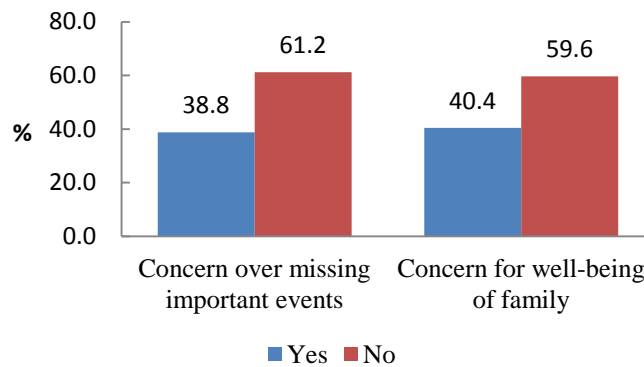
Of those Reservists who had deployed, 1 in 5 cited receiving an injury during their last deployment where they became dazed, confused, or “saw stars.” Nearly one third of the Marines reported experiencing a blast or explosion (e.g., improvised explosive device, rocket-propelled grenade), and similar numbers endorsed experiencing a fall. Moreover, 1 in 5 cited experiencing a vehicular accident/crash during deployment.



### Deployment Concerns

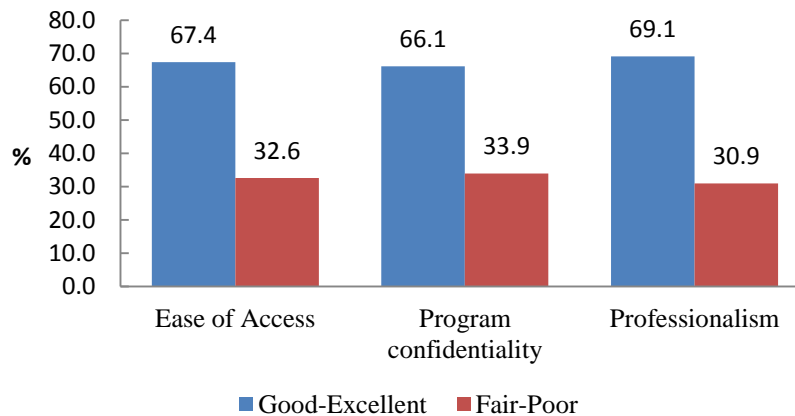
The Reservists were asked about homefront concerns they may have had while deployed. Although they endorsed some concerns related to their civilian job, family concerns were cited more frequently. Specifically, more than one third (excluding those endorsing “not applicable”)

cited moderate or a great deal of concern about missing important events at home such as birthdays, weddings, funerals, and graduation. Similar numbers endorsed a moderate or great deal of concern about the well-being of their family while away on deployment.



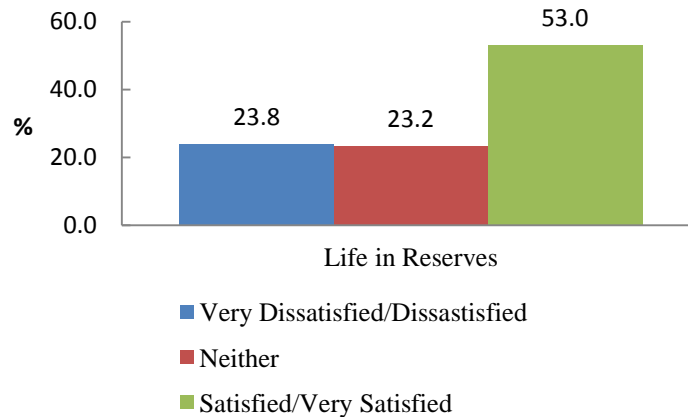
### Postdeployment Programs

Nearly half of the Reservists (45%) participated in a Returning Warrior Workshop upon returning from deployment, while 35% had attended a Return and Reunion Event. Of those who had attended such an event, most found it easy to access, were pleased with the confidentiality of the program, and felt that it was provided in a professional manner.



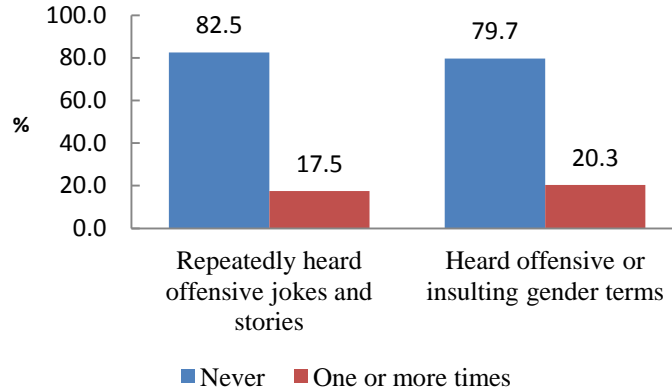
### Experiences and Expectations of Life in the Reserves

Overall, about half of the Reservists in this sample reported being satisfied or very satisfied with life in the Reserves. Less than one quarter were neither satisfied nor dissatisfied, while similar numbers indicated that they were dissatisfied or very dissatisfied. Most respondents (67%) endorsed being satisfied or very satisfied with their current assignment, while 33% indicated that they were dissatisfied or very dissatisfied with their current assignment.



### Gender-Related Experiences

Marines in this study were asked about gender-related talk and/or behaviors they have experienced or witnessed within the past 12 months that were unwanted, uninvited, or in which they did not willingly participate. For the most part, less than 10% of respondents endorsed each of these gender-related experiences. In one exception, nearly 1 in 5 reported at least one instance in which active duty, Reserve military personnel, DoD civilians, and/or contractors of either gender referred to people of one's gender in insulting or offensive terms. A similar proportion of Reservists endorsed one or more instances where such an individual repeatedly told offensive sexual stories or jokes.



### Conclusions and Implications

- Mental health issues—namely anxiety, depression, PTSD, and suicidal ideation—are among the most persistent threats to the Marine Corps Reserve population. It is therefore concerning that symptom burden indicative of a possible mental disorder increased significantly from 2006 to 2011 (rising from 30% to 39% of Reservists), while mental health care service utilization remained flat (15% vs. 17%). This suggests a possible rise in the number of Marine Corps Reservists with untreated mental health concerns. Similarly, the number of participants who felt they needed mental health counseling in the past year (22.9%) substantially exceeded the number who received counseling during the same time frame (14.2%), again suggesting a shortfall in receipt of care. Concern regarding career damage and



notification of superiors regarding mental health treatment are likely barriers to receipt of mental health care.

- Frequent use of pain medication, along with the fact that it is often unreported and taken without a prescription is of concern, as is the prevalence of alcohol and tobacco use. Yet, the level of drug- and alcohol-related consequences did not change significantly from 2006 to 2011.
- As noted earlier, over one third of the Reservists reported not knowing how to apply for VA benefits and nearly half did not know that if they serve in OEF/OIF then they are eligible for VA benefits for up to 5 years. Nearly 40% of respondents had not received any dental treatment within the last year, most of whom attributed this to an inability to afford dental care and not being aware that one could receive a free exam and class 3 treatment. Deficient awareness of health care benefits is a significant yet modifiable barrier to receiving both dental and medical treatment.
- Family and financial stress represent promising pivot points for intervention; this is further highlighted by the fact that family and friends are crucial sources of support for these Reservists.
- Regarding postdeployment readjustment, social support resources were deemed by Reservists to be effective or very effective during the transition to civilian life. Most Reservists who attended a postdeployment transition event were pleased with the access, confidentiality, and professionalism of the event.
- The prevalence of mental health issues and suicidal ideation may have implications for policymaking; deficient awareness of VA and dental health care benefits may be addressed via policy as well. Mental health issues definitely warrant attention by medical providers caring for this population, as is the frequent use of pain medication. Additional educational materials and resources that inform and encourage help-seeking for mental health concerns and substance abuse issues among Reservists are recommended.
- Finally, adoption of new risky behaviors after deployment is an emergent concern, since injuries and accidents are a well-documented cause of early death in service members and veterans. Since the available scientific literature does not yet fully address this issue, we recommend prospective research studies to evaluate factors influencing the propensity to adopt risky behaviors upon return from deployment.

## References

- Bray, R. M., Pemberton, M. R., Hourani, L. L., Witt, M., Rae Olmsted, K. L., Brown, J. M., ... Bradshaw, M. (2009). *2008 Department of Defense Survey of Health Related Behaviors Among Active Duty Personnel*. (Report No. RTI/10940-FR). Research Triangle Park, NC: RTI International.
- Chu, D. S. (2006, March 1). *Prepared Statement of The Honorable David S. C. Chu Under Secretary of Defense (Personnel and Readiness) Before the Senate Armed Services Personnel Subcommittee*. Washington, DC. Retrieved from [http://www.dod.mil/dodgc/olc/testimony\\_old/109\\_second.html](http://www.dod.mil/dodgc/olc/testimony_old/109_second.html)
- Hourani, L. L., Bray, R. M., Marsden, M. E., Witt, M., Vandermaas-Peeler, R., Scheffler, S., ...Strange, L. (2007). *2006 Department of Defense Survey of Health-Related Behaviors Among Guard and Reserve Forces*. (Report No. RTI/9842.001/201-DR). Research Triangle Park, NC: RTI International.
- Jacobson, I. G., Ryan, M. A. K., Hooper, T. I., Smith, T. C., Amoroso, P. J., Boyko, E. J., ... Bell, N. S. (2008). Alcohol use and alcohol-related problems before and after military combat deployment. *Journal of the American Medical Association*, 300(6), 663–675.
- Milliken, C. S., Auchterlonie, J. L., & Hoge, C. W. (2007). Longitudinal assessment of mental health problems among active and reserve component soldiers returning from the Iraq war. *Journal of the American Medical Association*, 298(18), 2141–2148.
- Vogt, D. S., Samper, R. E., King, D. W., King, L. A., & Martin, J. A. (2008). Deployment stressors and posttraumatic stress symptomology: Comparing active duty and National Guard/Reserve personnel from Gulf War I. *Journal of Traumatic Stress*, 21(1), 66–74.

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